

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Richland  
2800 George Washington Way  
Richland, WA 99352  
Tel: (509)375-3131

TestAmerica Job ID: 300-4398-1

TestAmerica Sample Delivery Group: WC1639  
Client Project/Site: F16-020

For:

CH2M Hill Plateau Remediation Company  
PO BOX 1600  
Mail Stop R3-50  
Richland, Washington 99352

Attn: CPP Sample Management



Authorized for release by:

12/21/2016 9:57:54 AM

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### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this package. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the attached signature.*

*The laboratory is accredited to EPA 7196A in Solid and Chemical Materials, per Washington State Department of Ecology this is approved for non-discharge water samples. The sample/ sample duplicate RPD agreement is not applicable if one or both results are less than five times the MDL.*

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Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

## Qualifiers

### HPLC/IC

Qualifier	Qualifier Description
U	Analyzed for but not detected.
B	Estimated result. Result is less than the RL, but greater than MDL

### General Chemistry

Qualifier	Qualifier Description
U	Analyzed for but not detected.
D	The reported value is from a dilution.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

**Job ID: 300-4398-1**

**Laboratory: TestAmerica Richland**

**Narrative**

**Job Narrative  
300-4398-1**

**Comments**

This job is associated to SDG W07689 for rad analysis.

**Receipt**

The samples were received on 11/7/2016 3:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.2° C.

**HPLC/IC**

Method 300.0: Manual integration was performed on the following samples for Fluoride: B37PV2 (300-4398-2), B37PV0 (300-4398-4), B37PT4 (300-4398-5), B37PT0 (300-4398-6) and B37PT2 (300-4398-7).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				FL6-020-1435	PAGE 1 OF 1
COLLECTOR <b>T. Laird</b>	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days		
SAMPLING LOCATION C9489, Core 22, B353K4	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling	FIELD LOGBOOK NO. <b>N/A</b>	SAF NO. FL6-020	AIR QUALITY <input type="checkbox"/>			
ICE CHEST NO. NA	ACTUAL SAMPLE DEPTH <b>DS-0-126.6 ft</b>	COA 302632	METHOD OF SHIPMENT GOVERNMENT VEHICLE <b>Company TL 11/7/16</b>		<b>ORIGINAL</b>		
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. NA	BILL OF LADING/AIR BILL NO. NA					

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. A=Air DL=Drum L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	PRESERVATION	COOL <=6C	WARM	COOL <=6C
		HOLDING TIME	30 Days	6 Months	28 Days/48 Hours
SPECIAL HANDLING AND/OR STORAGE NA	NO. OF CONTAINER(S)	TYPE OF CONTAINER	VOLUME	7196 CM6: COMMON; SEE ITEM (1) IN SPECIAL INSTRUCTIONS	7196 CM6: COMMON; SEE ITEM (2) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B37/PT6	SOIL	11/7/16	1245	X	X

4439d  
3021639



300-4398 COC

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	<p>TRVL-17-008</p> <p>(1) GAMMA GS: COMMON; AMCMISO IE PRECIP AEA: COMMON {Americium-241}; PUISO IE PRECIP AEA: COMMON {Plutonium-238, Plutonium-239/240}; UIISO PLATE AEA: COMMON {Uranium-233/234, Uranium-235, Uranium-238}; C14 LSC: COMMON; I129 SEP LEPS GS: COMMON; NI63 LSC: COMMON; NP237 IE PRECIP AEA: COMMON {Neptunium-237}; SRTOT SEP PRECIP GPC: COMMON {total beta radioisotopes}; TC99 ETYDSK LSC: COMMON; TRITIUM DIST LSC: COMMON; (2) 300.0 ANIONS IC: COMMON; 300.0 ANIONS IC: COMMON (Add-on) {Phosphorus in phosphate};</p>	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-020-1441	PAGE 1 OF 1
COLLECTOR <i>Tom Laird</i>	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9489, Core 43, B353P6	PROJECT DESIGNATION 200-DV-1, Operable Unit Characterization of Waste Sites Phase 3 Sampling	FIELD LOGBOOK NO. NA	SAF NO. F16-020	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. NA	ACTUAL SAMPLE DEPTH 229-230	COA 302632	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. NA	BILL OF LADING/AIR BILL NO. COMPANY			

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <=6C	None	Cool <=6C
		HOLDING TIME	30 Days	6 Months	28 Days/48 Hours
		TYPE OF CONTAINER	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1
		VOLUME	60mL	500mL	400 mL
		SAMPLE ANALYSIS	7196, C66; COMMON;	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B37PV2	SOIL	11/7/16	1456	X	X

January 4, 2017

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>Tom Laird</i>	DATE/TIME 11/7/16 1550	RECEIVED BY/STORED IN <i>J. Book</i>	DATE/TIME 11/7/16 1550	TRVL-17-008 (1) GAMMA_GS: COMMON; AMCMISO_IE PRECIP_AEA: COMMON {Americium-241}; PUISO_IE PRECIP_AEA: COMMON {Plutonium-238, Plutonium-239/240}; UISO_PLATE_AEA: COMMON {Uranium-233/234, Uranium-235, Uranium-238}; C14_LSC: COMMON; I129_SEP_LEPS_GS: COMMON; NI63_LSC: COMMON; NP237_IE_PRECIP_AEA: COMMON {Neptunium-237}; SRTOT_SEP_PRECIP_GPC: COMMON {Total beta radiostrontium}; TC99_LTVDSK_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; (2) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-on) {Phosphorus in phosphate};	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				FL6-020-1437	PAGE 1 OF 1
COLLECTOR <b>Tom Laird</b>	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days		
SAMPLING LOCATION C9489, Core 30, B353M0	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling	FIELD LOGBOOK NO.	SAF NO. F16-020	AIR QUALITY <input type="checkbox"/>			
ICE CHEST NO. NA	FIELD LOGBOOK NO. NA	ACTUAL SAMPLE DEPTH 163.0-164.0 ft	COA 302632	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL		
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. NA	BILL OF LADING/AIR BILL NO. NA	COMPANY JR 11/7/14				

MATRIX*	SPECIAL HANDLING AND/OR STORAGE NA	PRESERVATION			HOLDING TIME			TYPE OF CONTAINER			NO. OF CONTAINER(S)			VOLUME			SAMPLE ANALYSIS		
		Cool <=6C	None	Cool <=6C	30 Days	6 Months	28 Days/48 Hours	G/P	G/P	G/P	1	1	1	60mL	500mL	40mL	7196 C96: COMMON;	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
B37/PT8	SOIL																		

4398  
WCL639

January 4, 2017

CHAIN OF POSSESSION		SIGN/PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <b>Tom Laird</b>	DATE/TIME 11/7/16 1550	RECEIVED BY/STORED IN <b>J. Bock</b>	DATE/TIME 11-11-16 1550	<p>TRVL-17-008</p> <p>(1) GAMMA_GS: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON {Americium-241}; PUISO_IE_PRECIP_AEA: COMMON {Plutonium-238, Plutonium-239/240}; USIO_PLATE_AEA: COMMON {Uranium-233/234, Uranium-235, Uranium-238}; C14_LSC: COMMON; I129_SEP_LEPS_GS: COMMON; NI63_LSC: COMMON; NP237_IE_PRECIP_AEA: COMMON {Neptunium-237}; SRTOT_SEP_PRECIP_GPC: COMMON {total beta radiostrontium}; TC99_ETVDSK_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; (2) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-on) {Phosphorus in phosphate};</p>	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FL16-020-1439	PAGE 1 OF 1
COLLECTOR <i>Tom Laird</i>	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9489, Core 37, B353N4	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling	FIELD LOGBOOK NO. N/A	SAF NO. F16-020	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. NA	ACTUAL SAMPLE DEPTH <i>199-200.0 ft</i>	COA 302632	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. NA	BILL OF LADING/AIR BILL NO. NA	COMPANY <i>JE 11/7/14</i>		

MATRIX*	POSSIBLE SAMPLE HAZARDS/REMARKS A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Sediment T=Tissue V=Vegetation W=Water WT=Wipe X=Other	PRESERVATION	COOL <=6C	NONE	COOL <=6C
		HOLDING TIME	30 Days	6 Months	28 Days/48 Hours
SPECIAL HANDLING AND/OR STORAGE NA		TYPE OF CONTAINER	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1
SAMPLE NO. B37PV0	MATRIX* SOIL	SAMPLE DATE 11/7/16	SAMPLE TIME 1420	X	X
				7196, G66; COMMON; IN SPECIAL INSTRUCTIONS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

CHAIN OF POSSESSION		SIGN/PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>Tom Laird</i>	DATE/TIME 11/7/16 1550	RECEIVED BY/STORED IN <i>J. Bock</i>	DATE/TIME 11/7/16 1550	<p>TRVL-17-008</p> <p>(1) GAMMA_GS: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON {Americium-241}; PUISO_IE_PRECIP_AEA: COMMON {Plutonium-238, Plutonium-239/240}; UIISO_PLATE_AEA: COMMON {Uranium-233/234, Uranium-235, Uranium-238}; C14_LSC: COMMON; I129_SEP_LEPS_GS: COMMON; NI63_LSC: COMMON; NP237_IE_PRECIP_AEA: COMMON {Neptunium-237}; SRTOT_SEP_PRECIP_GPC: COMMON {Total beta radiostrontium}; TC99_ETVDSK_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; (2) 300.0 ANIONS_IC: COMMON; 300.0 ANIONS_IC: COMMON (Add-on) {Phosphorus in phosphate};</p>	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME



CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FIG-020-1433	PAGE 1 OF 1
COLLECTOR <i>Tom Laird</i>	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9489, Core 18, B35316	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling	FIELD LOGBOOK NO. N/A	SAF NO. F16-020	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. NA	FIELD LOGBOOK NO. N/A	ACTUAL SAMPLE DEPTH 104.0 - 105.0 ft	COA 302632	METHOD OF SHIPMENT GOVERNMENT VEHICLE Company TR 11/7/16	ORIGINAL
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. NA	BILL OF LADING/AIR BILL NO. NA			

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	Cool <=6C	None	Cool <=6C
		HOLDING TIME	30 Days	6 Months	28 Days/48 Hours
		TYPE OF CONTAINER	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1
		VOLUME	60mL	500mL	439.8 mL
SPECIAL HANDLING AND/OR STORAGE NA	SAMPLE ANALYSIS	7196 CMB: COMMON;	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	439.8 mL

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM <i>Tom Laird</i>	RECEIVED BY/STORED IN <i>J. Bock, TARR</i>	TRVL-17-008 (1) GAMMA GS: COMMON; AMCMISO IE PRECIP AEA: COMMON {Americium-241}; PUSO IE PRECIP AEA: COMMON {Plutonium-238, Plutonium-239/240}; UISO PLATE AEA: COMMON {Uranium-233/234, Uranium-235, Uranium-238}; C14 LSC: COMMON; I129 SEP LEPS GS: COMMON; NI63 LSC: COMMON; NP237 IE PRECIP AEA: COMMON {Neptunium-237}; SRTOT SEP PRECIP GPC: COMMON {total beta radioisotopes}; TC99 ETVDK LSC: COMMON; TRITIUM DIST LSC: COMMON; (2) 300.0 ANIONS IC: COMMON; 300.0 ANIONS IC: COMMON (Add-on) {Phosphorus in phosphate};
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

10 of 26 12/21/2016

January 4, 2017

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				FIG-020-1431	PAGE 1 OF 1
<b>COLLECTOR</b> <i>T. Laird</i>		<b>COMPANY CONTACT</b> TODAK, D		<b>TELEPHONE NO.</b> 376-6427		<b>PROJECT COORDINATOR</b> TODAK, D	
<b>SAMPLING LOCATION</b> C9489, Core 13, B353H6 DUP		<b>PROJECT DESIGNATION</b> 200-DV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling		<b>FIELD LOGBOOK NO.</b> <i>NA</i>		<b>SAF NO.</b> F16-020	
<b>ICE CHEST NO.</b> <i>NA</i>		<b>ACTUAL SAMPLE DEPTH</b> <i>79-81.0 ft</i>		<b>COA</b> 302632		<b>METHOD OF SHIPMENT</b> GOVERNMENT VEHICLE	
<b>SHIPPED TO</b> TestAmerica Incorporated, Richland		<b>OFFSITE PROPERTY NO.</b> <i>NA</i>		<b>BILL OF LADING/AIR BILL NO.</b> <i>NA</i>		<b>COMPANY</b> <i>JR 4/7/16</i>	
<b>MATRIX*</b> A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other		<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> *Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		<b>PRESERVATION</b> Cool <=6C None Cool <=6C		<b>PRICE CODE</b> 8H	
		<b>HOLDING TIME</b> 30 Days		<b>6 Months</b>		<b>DATA TURNAROUND</b> 30 Days / 30 Days	
		<b>TYPE OF CONTAINER</b> G/P		<b>G/P</b>		<b>AIR QUALITY</b> <input type="checkbox"/>	
		<b>NO. OF CONTAINER(S)</b> 1		<b>1</b>		<b>ORIGINAL</b>	
		<b>VOLUME</b> 60mL		<b>500mL</b>			
		<b>SAMPLE ANALYSIS</b>		<b>736 CDS: COMMON; IN SPECIAL INSTRUCTIONS</b>		<b>SEE ITEM (1) IN SPECIAL INSTRUCTIONS</b>	
<b>SAMPLE NO.</b> B37/PT2		<b>MATRIX*</b> SOIL		<b>SAMPLE DATE</b> <i>4/7/16</i>		<b>SAMPLE TIME</b> <i>1115</i>	
				<b>X</b>		<b>X</b>	
				<b>X</b>		<b>X</b>	
<b>CHAIN OF POSSESSION</b>		<b>SIGN/PRINT NAMES</b>		<b>SPECIAL INSTRUCTIONS</b>			
RELINQUISHED BY/REMOVED FROM <i>Tom Laird Tom Laird</i>		DATE/TIME <i>11/7/16 1530</i>		TRVL-17-008			
RELINQUISHED BY/REMOVED FROM <i>PBS</i>		DATE/TIME <i>11/7/16 1530</i>		(1) GAMMA_GS: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON			
RELINQUISHED BY/REMOVED FROM <i>J. Bock, TARI 11-11-16/1530</i>		DATE/TIME <i>11/7/16 1530</i>		{Americium-241}; PUISO_IE_PRECIP_AEA: COMMON {Plutonium-238, Plutonium-239/240}; UIISO_PLATE_AEA: COMMON {Uranium-233/234, Uranium-235, Uranium-238}; C14_LSC: COMMON; I129_SEP_LEPS_GS: COMMON; NI63_LSC: COMMON; NP237_IE_PRECIP_AEA: COMMON {Neptunium-237}; SRTOT_SEP_PRECIP_GPC: COMMON {total beta radioisotopes}; TC99_ETVDSK_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; (2) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-on) {Phosphorus in phosphate};			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN			
<b>LABORATORY SECTION</b>		<b>RECEIVED BY</b>		<b>TITLE</b>			
<b>FINAL SAMPLE DISPOSITION</b>		<b>DISPOSAL METHOD</b>		<b>DISPOSED BY</b>			

# January 4, 2017 Detection Summary

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

## Client Sample ID: B37PT6

Lab Sample ID: 300-4398-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12		2.0	0.99	mg/Kg	1		300.0	Soluble
Nitrate as N	25		0.28	0.14	mg/Kg	1		300.0	Soluble
Fluoride	0.32	B	0.50	0.25	mg/Kg	1		300.0	Soluble
Sulfate	4.6		2.5	1.2	mg/Kg	1		300.0	Soluble

## Client Sample ID: B37PV2

Lab Sample ID: 300-4398-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		2.0	0.99	mg/Kg	1		300.0	Soluble
Nitrate as N	25		0.28	0.14	mg/Kg	1		300.0	Soluble
Fluoride	0.33	B	0.50	0.25	mg/Kg	1		300.0	Soluble
Sulfate	10		2.5	1.2	mg/Kg	1		300.0	Soluble

## Client Sample ID: B37PT8

Lab Sample ID: 300-4398-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.3		2.0	0.99	mg/Kg	1		300.0	Soluble
Nitrate as N	26		0.28	0.14	mg/Kg	1		300.0	Soluble
Fluoride	0.30	B	0.50	0.25	mg/Kg	1		300.0	Soluble
Sulfate	5.5		2.5	1.2	mg/Kg	1		300.0	Soluble

## Client Sample ID: B37PV0

Lab Sample ID: 300-4398-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.2		2.0	1.0	mg/Kg	1		300.0	Soluble
Nitrate as N	36		0.28	0.14	mg/Kg	1		300.0	Soluble
Fluoride	0.31	B	0.50	0.25	mg/Kg	1		300.0	Soluble
Sulfate	7.4		2.5	1.2	mg/Kg	1		300.0	Soluble

## Client Sample ID: B37PT4

Lab Sample ID: 300-4398-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.2		2.0	0.99	mg/Kg	1		300.0	Soluble
Nitrate as N	30		0.28	0.14	mg/Kg	1		300.0	Soluble
Fluoride	0.37	B	0.49	0.25	mg/Kg	1		300.0	Soluble
Sulfate	20		2.5	1.2	mg/Kg	1		300.0	Soluble

## Client Sample ID: B37PT0

Lab Sample ID: 300-4398-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.5		2.0	0.99	mg/Kg	1		300.0	Soluble
Nitrate as N	41		0.28	0.14	mg/Kg	1		300.0	Soluble
Fluoride	0.40	B	0.50	0.25	mg/Kg	1		300.0	Soluble
Sulfate	5.6		2.5	1.2	mg/Kg	1		300.0	Soluble

## Client Sample ID: B37PT2

Lab Sample ID: 300-4398-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		2.0	0.99	mg/Kg	1		300.0	Soluble
Nitrate as N	41		0.28	0.14	mg/Kg	1		300.0	Soluble

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

Client Sample ID: B37PT2 (Continued)

Lab Sample ID: 300-4398-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.40	B	0.50	0.25	mg/Kg	1		300.0	Soluble
Sulfate	5.8		2.5	1.2	mg/Kg	1		300.0	Soluble

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

**Client Sample ID: B37PT6**

**Lab Sample ID: 300-4398-1**

Date Collected: 11/07/16 12:45

Matrix: Soil

Date Received: 11/07/16 15:50

**Method: 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		2.0	0.99	mg/Kg			11/08/16 15:43	1
Nitrate as N	25		0.28	0.14	mg/Kg			11/08/16 15:43	1
Fluoride	0.32	B	0.50	0.25	mg/Kg			11/08/16 15:43	1
Nitrite as N	0.19	U	0.38	0.19	mg/Kg			11/08/16 15:43	1
Orthophosphate as P	0.41	U	0.81	0.41	mg/Kg			11/08/16 15:43	1
Sulfate	4.6		2.5	1.2	mg/Kg			11/08/16 15:43	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.15	U	2.0	0.15	mg/Kg		12/07/16 11:17	12/08/16 11:13	1

**Client Sample ID: B37PV2**

**Lab Sample ID: 300-4398-2**

Date Collected: 11/07/16 14:50

Matrix: Soil

Date Received: 11/07/16 15:50

**Method: 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		2.0	0.99	mg/Kg			11/08/16 16:28	1
Nitrate as N	25		0.28	0.14	mg/Kg			11/08/16 16:28	1
Fluoride	0.33	B	0.50	0.25	mg/Kg			11/08/16 16:28	1
Nitrite as N	0.19	U	0.38	0.19	mg/Kg			11/08/16 16:28	1
Orthophosphate as P	0.41	U	0.81	0.41	mg/Kg			11/08/16 16:28	1
Sulfate	10		2.5	1.2	mg/Kg			11/08/16 16:28	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.15	U	2.0	0.15	mg/Kg		12/07/16 11:17	12/08/16 12:11	1

**Client Sample ID: B37PT8**

**Lab Sample ID: 300-4398-3**

Date Collected: 11/07/16 13:13

Matrix: Soil

Date Received: 11/07/16 15:50

**Method: 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.3		2.0	0.99	mg/Kg			11/08/16 16:43	1
Nitrate as N	26		0.28	0.14	mg/Kg			11/08/16 16:43	1
Fluoride	0.30	B	0.50	0.25	mg/Kg			11/08/16 16:43	1
Nitrite as N	0.19	U	0.38	0.19	mg/Kg			11/08/16 16:43	1
Orthophosphate as P	0.41	U	0.81	0.41	mg/Kg			11/08/16 16:43	1
Sulfate	5.5		2.5	1.2	mg/Kg			11/08/16 16:43	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.15	U	2.0	0.15	mg/Kg		12/07/16 11:17	12/08/16 12:26	1



Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

**Client Sample ID: B37PV0**

**Lab Sample ID: 300-4398-4**

Date Collected: 11/07/16 14:20

Matrix: Soil

Date Received: 11/07/16 15:50

**Method: 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.2		2.0	1.0	mg/Kg			11/08/16 16:58	1
Nitrate as N	36		0.28	0.14	mg/Kg			11/08/16 16:58	1
Fluoride	0.31	B	0.50	0.25	mg/Kg			11/08/16 16:58	1
Nitrite as N	0.19	U	0.38	0.19	mg/Kg			11/08/16 16:58	1
Orthophosphate as P	0.41	U	0.81	0.41	mg/Kg			11/08/16 16:58	1
Sulfate	7.4		2.5	1.2	mg/Kg			11/08/16 16:58	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.15	U	2.0	0.15	mg/Kg		12/07/16 11:17	12/08/16 12:41	1

**Client Sample ID: B37PT4**

**Lab Sample ID: 300-4398-5**

Date Collected: 11/07/16 11:50

Matrix: Soil

Date Received: 11/07/16 15:50

**Method: 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.2		2.0	0.99	mg/Kg			11/08/16 17:13	1
Nitrate as N	30		0.28	0.14	mg/Kg			11/08/16 17:13	1
Fluoride	0.37	B	0.49	0.25	mg/Kg			11/08/16 17:13	1
Nitrite as N	0.19	U	0.38	0.19	mg/Kg			11/08/16 17:13	1
Orthophosphate as P	0.40	U	0.80	0.40	mg/Kg			11/08/16 17:13	1
Sulfate	20		2.5	1.2	mg/Kg			11/08/16 17:13	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.15	U	2.0	0.15	mg/Kg		12/07/16 11:17	12/08/16 12:55	1

**Client Sample ID: B37PT0**

**Lab Sample ID: 300-4398-6**

Date Collected: 11/07/16 11:15

Matrix: Soil

Date Received: 11/07/16 15:50

**Method: 300.0 - Anions, Ion Chromatography - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.5		2.0	0.99	mg/Kg			11/08/16 17:28	1
Nitrate as N	41		0.28	0.14	mg/Kg			11/08/16 17:28	1
Fluoride	0.40	B	0.50	0.25	mg/Kg			11/08/16 17:28	1
Nitrite as N	0.19	U	0.38	0.19	mg/Kg			11/08/16 17:28	1
Orthophosphate as P	0.41	U	0.81	0.41	mg/Kg			11/08/16 17:28	1
Sulfate	5.6		2.5	1.2	mg/Kg			11/08/16 17:28	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.15	U	2.0	0.15	mg/Kg		12/07/16 11:17	12/08/16 13:39	1

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

Client Sample ID: B37PT2

Lab Sample ID: 300-4398-7

Date Collected: 11/07/16 11:15

Matrix: Soil

Date Received: 11/07/16 15:50

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		2.0	0.99	mg/Kg			11/08/16 18:13	1
Nitrate as N	41		0.28	0.14	mg/Kg			11/08/16 18:13	1
Fluoride	0.40	B	0.50	0.25	mg/Kg			11/08/16 18:13	1
Nitrite as N	0.19	U	0.38	0.19	mg/Kg			11/08/16 18:13	1
Orthophosphate as P	0.41	U	0.81	0.41	mg/Kg			11/08/16 18:13	1
Sulfate	5.8		2.5	1.2	mg/Kg			11/08/16 18:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.15	U	2.0	0.15	mg/Kg		12/07/16 11:17	12/08/16 13:54	1

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-6327/1-A

Matrix: Solid

Analysis Batch: 6322

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.14	U	0.28	0.14	mg/Kg			11/08/16 15:13	1
Nitrite as N	0.19	U	0.38	0.19	mg/Kg			11/08/16 15:13	1
Orthophosphate as P	0.41	U	0.81	0.41	mg/Kg			11/08/16 15:13	1

Lab Sample ID: LCS 300-6327/2-A

Matrix: Solid

Analysis Batch: 6322

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	22.5	22.4		mg/Kg		100	80 - 120
Nitrite as N	30.4	30.3		mg/Kg		100	80 - 120
Orthophosphate as P	65.1	63.5		mg/Kg		98	80 - 120

Lab Sample ID: 300-4398-1 MS

Matrix: Soil

Analysis Batch: 6322

Client Sample ID: B37PT6

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	25		22.4	45.8		mg/Kg		93	75 - 125
Nitrite as N	0.19	U	30.2	30.1		mg/Kg		100	75 - 125
Orthophosphate as P	0.41	U	64.7	62.9		mg/Kg		97	75 - 125

Lab Sample ID: 300-4398-1 DU

Matrix: Soil

Analysis Batch: 6322

Client Sample ID: B37PT6

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	25		25.8		mg/Kg		3	20
Nitrite as N	0.19	U	0.19	U	mg/Kg		NC	20
Orthophosphate as P	0.41	U	0.41	U	mg/Kg		NC	20

Lab Sample ID: MB 300-6327/1-A

Matrix: Solid

Analysis Batch: 6323

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	2.0	1.0	mg/Kg			11/08/16 15:13	1
Fluoride	0.25	U	0.50	0.25	mg/Kg			11/08/16 15:13	1
Sulfate	1.2	U	2.5	1.2	mg/Kg			11/08/16 15:13	1

Lab Sample ID: LCS 300-6327/2-A

Matrix: Solid

Analysis Batch: 6323

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	160	156		mg/Kg		98	80 - 120
Fluoride	39.9	39.3		mg/Kg		98	80 - 120
Sulfate	199	196		mg/Kg		98	80 - 120

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 300-4398-1 MS  
Matrix: Soil  
Analysis Batch: 6323

Client Sample ID: B37PT6  
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12		159	168		mg/Kg		99	75 - 125
Fluoride	0.32	B	39.7	39.1		mg/Kg		98	75 - 125
Sulfate	4.6		198	199		mg/Kg		98	75 - 125

Lab Sample ID: 300-4398-1 DU  
Matrix: Soil  
Analysis Batch: 6323

Client Sample ID: B37PT6  
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	12		12.5		mg/Kg		7	20
Fluoride	0.32	B	0.318	B	mg/Kg		0.7	20
Sulfate	4.6		4.48		mg/Kg		3	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-6694/1-A  
Matrix: Solid  
Analysis Batch: 6774

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 6694

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.15	U	2.0	0.15	mg/Kg		12/07/16 11:17	12/08/16 10:44	1

Lab Sample ID: LCS 300-6694/2-A  
Matrix: Solid  
Analysis Batch: 6774

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 6694

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	20.0	19.51		mg/Kg		98	85 - 115

Lab Sample ID: 300-4398-1 MS  
Matrix: Soil  
Analysis Batch: 6774

Client Sample ID: B37PT6  
Prep Type: Total/NA  
Prep Batch: 6694

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.15	U	29.7	27.98		mg/Kg		94	75 - 125

Lab Sample ID: 300-4398-1 MSI  
Matrix: Soil  
Analysis Batch: 6774

Client Sample ID: B37PT6  
Prep Type: Total/NA  
Prep Batch: 6694

Analyte	Sample Result	Sample Qualifier	Spike Added	MSI Result	MSI Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.15	U	635	657.8	D	mg/Kg		104	75 - 125

Lab Sample ID: 300-4398-1 DU  
Matrix: Soil  
Analysis Batch: 6774

Client Sample ID: B37PT6  
Prep Type: Total/NA  
Prep Batch: 6694

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	0.15	U	0.15	U	mg/Kg		NC	35

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

## HPLC/IC

### Analysis Batch: 6322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-4398-1	B37PT6	Soluble	Soil	300.0	6327
300-4398-2	B37PV2	Soluble	Soil	300.0	6327
300-4398-3	B37PT8	Soluble	Soil	300.0	6327
300-4398-4	B37PV0	Soluble	Soil	300.0	6327
300-4398-5	B37PT4	Soluble	Soil	300.0	6327
300-4398-6	B37PT0	Soluble	Soil	300.0	6327
300-4398-7	B37PT2	Soluble	Soil	300.0	6327
MB 300-6327/1-A	Method Blank	Soluble	Solid	300.0	6327
LCS 300-6327/2-A	Lab Control Sample	Soluble	Solid	300.0	6327
300-4398-1 MS	B37PT6	Soluble	Soil	300.0	6327
300-4398-1 DU	B37PT6	Soluble	Soil	300.0	6327

### Analysis Batch: 6323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-4398-1	B37PT6	Soluble	Soil	300.0	6327
300-4398-2	B37PV2	Soluble	Soil	300.0	6327
300-4398-3	B37PT8	Soluble	Soil	300.0	6327
300-4398-4	B37PV0	Soluble	Soil	300.0	6327
300-4398-5	B37PT4	Soluble	Soil	300.0	6327
300-4398-6	B37PT0	Soluble	Soil	300.0	6327
300-4398-7	B37PT2	Soluble	Soil	300.0	6327
MB 300-6327/1-A	Method Blank	Soluble	Solid	300.0	6327
LCS 300-6327/2-A	Lab Control Sample	Soluble	Solid	300.0	6327
300-4398-1 MS	B37PT6	Soluble	Soil	300.0	6327
300-4398-1 DU	B37PT6	Soluble	Soil	300.0	6327

### Leach Batch: 6327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-4398-1	B37PT6	Soluble	Soil	DI Leach	
300-4398-2	B37PV2	Soluble	Soil	DI Leach	
300-4398-3	B37PT8	Soluble	Soil	DI Leach	
300-4398-4	B37PV0	Soluble	Soil	DI Leach	
300-4398-5	B37PT4	Soluble	Soil	DI Leach	
300-4398-6	B37PT0	Soluble	Soil	DI Leach	
300-4398-7	B37PT2	Soluble	Soil	DI Leach	
MB 300-6327/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 300-6327/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
300-4398-1 MS	B37PT6	Soluble	Soil	DI Leach	
300-4398-1 DU	B37PT6	Soluble	Soil	DI Leach	

## General Chemistry

### Prep Batch: 6694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-4398-1	B37PT6	Total/NA	Soil	3060A	
300-4398-2	B37PV2	Total/NA	Soil	3060A	
300-4398-3	B37PT8	Total/NA	Soil	3060A	
300-4398-4	B37PV0	Total/NA	Soil	3060A	
300-4398-5	B37PT4	Total/NA	Soil	3060A	
300-4398-6	B37PT0	Total/NA	Soil	3060A	

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

## General Chemistry (Continued)

### Prep Batch: 6694 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-4398-7	B37PT2	Total/NA	Soil	3060A	
MB 300-6694/1-A	Method Blank	Total/NA	Solid	3060A	
LCS 300-6694/2-A	Lab Control Sample	Total/NA	Solid	3060A	
300-4398-1 MS	B37PT6	Total/NA	Soil	3060A	
300-4398-1 MSI	B37PT6	Total/NA	Soil	3060A	
300-4398-1 DU	B37PT6	Total/NA	Soil	3060A	

### Analysis Batch: 6774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-4398-1	B37PT6	Total/NA	Soil	7196A	6694
300-4398-2	B37PV2	Total/NA	Soil	7196A	6694
300-4398-3	B37PT8	Total/NA	Soil	7196A	6694
300-4398-4	B37PV0	Total/NA	Soil	7196A	6694
300-4398-5	B37PT4	Total/NA	Soil	7196A	6694
300-4398-6	B37PT0	Total/NA	Soil	7196A	6694
300-4398-7	B37PT2	Total/NA	Soil	7196A	6694
MB 300-6694/1-A	Method Blank	Total/NA	Solid	7196A	6694
LCS 300-6694/2-A	Lab Control Sample	Total/NA	Solid	7196A	6694
300-4398-1 MS	B37PT6	Total/NA	Soil	7196A	6694
300-4398-1 MSI	B37PT6	Total/NA	Soil	7196A	6694
300-4398-1 DU	B37PT6	Total/NA	Soil	7196A	6694



Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

### Client Sample ID: B37PT6

Date Collected: 11/07/16 12:45

Date Received: 11/07/16 15:50

### Lab Sample ID: 300-4398-1

Matrix: Soil

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0399 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6322	11/08/16 15:43	CPM	TAL RCH
Soluble	Leach	DI Leach			5.0399 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6323	11/08/16 15:43	CPM	TAL RCH
Total/NA	Prep	3060A			2.5117 g	100 mL	6694	12/07/16 11:17	HR	TAL RCH
Total/NA	Analysis	7196A		1			6774	12/08/16 11:13	HR	TAL RCH

### Client Sample ID: B37PV2

Date Collected: 11/07/16 14:50

Date Received: 11/07/16 15:50

### Lab Sample ID: 300-4398-2

Matrix: Soil

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0451 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6322	11/08/16 16:28	CPM	TAL RCH
Soluble	Leach	DI Leach			5.0451 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6323	11/08/16 16:28	CPM	TAL RCH
Total/NA	Prep	3060A			2.5082 g	100 mL	6694	12/07/16 11:17	HR	TAL RCH
Total/NA	Analysis	7196A		1			6774	12/08/16 12:11	HR	TAL RCH

### Client Sample ID: B37PT8

Date Collected: 11/07/16 13:13

Date Received: 11/07/16 15:50

### Lab Sample ID: 300-4398-3

Matrix: Soil

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0277 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6322	11/08/16 16:43	CPM	TAL RCH
Soluble	Leach	DI Leach			5.0277 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6323	11/08/16 16:43	CPM	TAL RCH
Total/NA	Prep	3060A			2.5224 g	100 mL	6694	12/07/16 11:17	HR	TAL RCH
Total/NA	Analysis	7196A		1			6774	12/08/16 12:26	HR	TAL RCH

### Client Sample ID: B37PV0

Date Collected: 11/07/16 14:20

Date Received: 11/07/16 15:50

### Lab Sample ID: 300-4398-4

Matrix: Soil

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0207 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6322	11/08/16 16:58	CPM	TAL RCH
Soluble	Leach	DI Leach			5.0207 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6323	11/08/16 16:58	CPM	TAL RCH
Total/NA	Prep	3060A			2.5075 g	100 mL	6694	12/07/16 11:17	HR	TAL RCH
Total/NA	Analysis	7196A		1			6774	12/08/16 12:41	HR	TAL RCH

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

### Client Sample ID: B37PT4

Lab Sample ID: 300-4398-5

Date Collected: 11/07/16 11:50

Matrix: Soil

Date Received: 11/07/16 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0638 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6322	11/08/16 17:13	CPM	TAL RCH
Soluble	Leach	DI Leach			5.0638 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6323	11/08/16 17:13	CPM	TAL RCH
Total/NA	Prep	3060A			2.5032 g	100 mL	6694	12/07/16 11:17	HR	TAL RCH
Total/NA	Analysis	7196A		1			6774	12/08/16 12:55	HR	TAL RCH

### Client Sample ID: B37PT0

Lab Sample ID: 300-4398-6

Date Collected: 11/07/16 11:15

Matrix: Soil

Date Received: 11/07/16 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0256 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6322	11/08/16 17:28	CPM	TAL RCH
Soluble	Leach	DI Leach			5.0256 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6323	11/08/16 17:28	CPM	TAL RCH
Total/NA	Prep	3060A			2.5194 g	100 mL	6694	12/07/16 11:17	HR	TAL RCH
Total/NA	Analysis	7196A		1			6774	12/08/16 13:39	HR	TAL RCH

### Client Sample ID: B37PT2

Lab Sample ID: 300-4398-7

Date Collected: 11/07/16 11:15

Matrix: Soil

Date Received: 11/07/16 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0362 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6322	11/08/16 18:13	CPM	TAL RCH
Soluble	Leach	DI Leach			5.0362 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6323	11/08/16 18:13	CPM	TAL RCH
Total/NA	Prep	3060A			2.5131 g	100 mL	6694	12/07/16 11:17	HR	TAL RCH
Total/NA	Analysis	7196A		1			6774	12/08/16 13:54	HR	TAL RCH

### Client Sample ID: Method Blank

Lab Sample ID: MB 300-6327/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0116 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6322	11/08/16 15:13	CPM	TAL RCH
Soluble	Leach	DI Leach			5.0116 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6323	11/08/16 15:13	CPM	TAL RCH

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

### Client Sample ID: Method Blank

Lab Sample ID: MB 300-6694/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.5 g	100 mL	6694	12/07/16 11:17	HR	TAL RCH
Total/NA	Analysis	7196A		1			6774	12/08/16 10:44	HR	TAL RCH

### Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-6327/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0137 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6322	11/08/16 15:28	CPM	TAL RCH
Soluble	Leach	DI Leach			5.0137 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6323	11/08/16 15:28	CPM	TAL RCH

### Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-6694/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.5 g	100 mL	6694	12/07/16 11:17	HR	TAL RCH
Total/NA	Analysis	7196A		1			6774	12/08/16 10:58	HR	TAL RCH

### Client Sample ID: B37PT6

Lab Sample ID: 300-4398-1 MS

Date Collected: 11/07/16 12:45

Matrix: Soil

Date Received: 11/07/16 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0416 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6322	11/08/16 15:58	CPM	TAL RCH
Soluble	Leach	DI Leach			5.0416 g	50 mL	6327	11/08/16 11:21	CPM	TAL RCH
Soluble	Analysis	300.0		1			6323	11/08/16 15:58	CPM	TAL RCH
Total/NA	Prep	3060A			2.5239 g	100 mL	6694	12/07/16 11:17	HR	TAL RCH
Total/NA	Analysis	7196A		1			6774	12/08/16 11:27	HR	TAL RCH

### Client Sample ID: B37PT6

Lab Sample ID: 300-4398-1 MSI

Date Collected: 11/07/16 12:45

Matrix: Soil

Date Received: 11/07/16 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.5069 g	100 mL	6694	12/07/16 11:17	HR	TAL RCH
Total/NA	Analysis	7196A		20			6774	12/08/16 11:57	HR	TAL RCH

#### Laboratory References:

TAL RCH = TestAmerica Richland, 2800 George Washington Way, Richland, WA 99352, TEL (509)375-3131

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL RCH
7196A	Chromium, Hexavalent	SW846	TAL RCH

**Protocol References:**

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL RCH = TestAmerica Richland, 2800 George Washington Way, Richland, WA 99352, TEL (509)375-3131

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-020

TestAmerica Job ID: 300-4398-1  
SDG: WC1639

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-4398-1	B37PT6	Soil	11/07/16 12:45	11/07/16 15:50
300-4398-2	B37PV2	Soil	11/07/16 14:50	11/07/16 15:50
300-4398-3	B37PT8	Soil	11/07/16 13:13	11/07/16 15:50
300-4398-4	B37PV0	Soil	11/07/16 14:20	11/07/16 15:50
300-4398-5	B37PT4	Soil	11/07/16 11:50	11/07/16 15:50
300-4398-6	B37PT0	Soil	11/07/16 11:15	11/07/16 15:50
300-4398-7	B37PT2	Soil	11/07/16 11:15	11/07/16 15:50

January 4, 2017

## Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-4398-1

SDG Number: WC1639

Login Number: 4398

List Number: 1

Creator: Bock, Julie A

List Source: TestAmerica Richland

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	